



Amendments to the Claims

1. (Original): A computer-based method of generating natural language, comprising the steps of:
 - receiving a concept comprising attributes and corresponding values of each of said attributes from a user;
 - receiving grammar rules from the user, each rule including a head, a phrase fragment, a direction and a condition, wherein each phrase fragment includes one of said attributes;
 - receiving a scoring function from the user;
 - generating possible natural language phrases using the grammar rules;
 - determining an optimal natural language phrase from the possible natural language phrases using the scoring function; and
 - returning said optimal natural language phrase to the user.
2. (Original): The method of claim 1, wherein the head is a word.
3. (Original): The method of claim 1, wherein the phrase fragment is a natural language phrase fragment.
4. (Original): The method of claim 1, wherein the direction indicates a location of the phrase fragment.
5. (Original): The method of claim 1, wherein the condition is a code fragment for restricting use of a rule.
6. (Original): The method of claim 1, wherein each attribute in the optimal natural language phrase is replaced with its corresponding value.
7. (Original): The method of claim 1, wherein the optimal natural language phrase is a highest scoring natural language phrase that is consistent with the grammar rules.

8. (Previously Presented): The method of claim 1, wherein the scoring function is a probability P of a phrase of length N based on the probability P of a word w_i conditioned on two previous words, w_{i-1} and w_{i-2} , the scoring function comprises the equation:

$$\prod_{i=1 \dots N} P(w_i | w_{i-1}, w_{i-2})$$

9. (Original): The method of claim 1, wherein the attributes are variables.

10. (Original): The method of claim 4, wherein the direction indicates that the location of the phrase fragment is right of the head.

11. (Original): The method of claim 4, wherein the direction indicates that the location of the phrase fragment is left of the head.

12. (Previously Presented): A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform the method steps for generating natural language, the method comprising the steps of:

- receiving a concept comprising attributes and corresponding values of each of said attributes from a user;

- receiving grammar rules from the user, each rule including a head, a phrase fragment, a direction and a condition, wherein each phrase fragment includes one of said attributes;

- receiving a scoring function from the user;

- generating possible natural language phrases using the grammar rules;

- computing a score for each of the natural language phrases using the scoring function;

- returning the highest scoring natural language phrase to the user.

13. (Original): The program storage device of claim 12, wherein the head is a word.

14. (Original): The program storage device of claim 12, wherein the phrase fragment is a natural language phrase fragment.

15. (Original): The program storage device of claim 12, wherein the direction indicates a location of the phrase fragment.

16. (Original): The program storage device of claim 12, wherein the condition is a code fragment for restricting use of a rule.

17. (Original): The program storage device of claim 12, wherein each attribute in the optimal natural language phrase is replaced with its corresponding value.

18. (Original): The program storage device of claim 12, wherein the optimal natural language phrase is a highest scoring natural language phrase that is consistent with the grammar rules.

19. (Previously Presented): The program storage device of claim 12, wherein the scoring function is a probability P of a phrase of length N based on the probability P of a word w_i conditioned on two previous words, w_{i-1} and w_{i-2} , the scoring function comprises the equation:

$$\prod_{i=1}^N P(w_i | w_{i-1}, w_{i-2})$$

20. (Original): The program storage device of claim 12, wherein the attributes are variables.

21. (New): A computer-based method of generating natural language, comprising the steps of:

receiving a concept comprising attributes and corresponding values of each of said attributes from a user;

receiving grammar rules from the user, each rule including a head, a phrase fragment, a direction and a condition, wherein each phrase fragment includes one of said attributes;

receiving a scoring function from the user;

generating a plurality of possible natural language phrases using the grammar rules;

determining an optimal natural language phrase from the plurality of possible natural language phrases using the scoring function; and

returning said optimal natural language phrase to the user;

wherein the head is a word;

wherein the phrase fragment is a natural language phrase fragment comprising a plurality of words;

wherein the direction indicates a location of the phrase fragment;

wherein the condition is a code fragment for restricting use of a rule using a binary evaluation during run-time.